

# Mineral Industry Surveys

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## MOLYBDENUM IN APRIL 2000

Domestic production of molybdenum in concentrate in April 2000 was about 13% less than that of the previous month and was 35% less than that of April 1999, according to the U.S. Geological Survey (USGS). Producer stocks of molybdenum in concentrate, oxide, and other product forms were 9,900 metric tons at the beginning of 2000, 8,970 metric tons at the end of February, 8,450 metric tons at the end of March, and 6,600 metric tons at the end of April.

Included in this Mineral Industry Surveys are U.S. production and shipments of molybdenum concentrates and materials, plus U.S. consumption, by end use, and stocks, by material, of molybdenum in the previous and current month; also included are trade data for the previous month. During the current month, the Platt's Metals Week U.S. monthly average price for molybdenum concentrate was discontinued. The average price for dealer molybdenum oxide was \$5.622 per kilogram (\$2.555 per pound),

and that for dealer ferromolybdenum was \$7.606 per kilogram (\$3.450 per pound). The USGS estimated average monthly price for molybdenum concentrate was \$3.75 per kilogram (\$1.700 per pound).

For the week ending June 19, 2000, the Platt's Metals Week average price for dealer molybdenum oxide was \$6.393 per kilogram (\$2.900 per pound), and that for ferromolybdenum was \$8.047 per kilogram (\$3.650 per pound). The USGS estimated price for molybdenum concentrate was \$4.40 per kilogram (\$2.000 per pound).

The price of molybdenum materials started to increase in May of 2000. Concentrate is estimated to have risen \$0.30 a pound, ferromolybdenum rose \$0.20 a pound, and molybdic oxide rose \$0.30 a pound as of June 19, 2000. U.S. stocks of molybdenum have decreased by 33% between January 1, 2000, and the end of April 2000.

TABLE 1  
U.S. SALIENT MOLYBDENUM CONCENTRATE STATISTICS 1/

(Metric tons, contained molybdenum)

	1999	2000		Year to date
	January-December	March	April	
Production	43,000	3,010 r/	2,630	11,200
Shipments: 2/				
Domestic	28,800	1,530 r/	1,300	5,690
Export	11,900	806	846	3,400

r/ Revised.

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

2/ Includes molybdic oxides, metal powder, ammonium molybdate, sodium molybdate, and other.

TABLE 2  
U.S. REPORTED PRODUCTION AND SHIPMENTS OF MOLYBDENUM PRODUCTS 1/

(Metric tons, contained molybdenum)

	1999	2000		Year to date
	January-December	March	April	
Gross production	39,800	4,170	3,290	14,500
Internal consumption 2/	20,500	2,080	1,610	7,520
Gross shipments	39,000	3,860	3,310	14,100

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

2/ Includes molybdic oxides, metal powder, ammonium molybdate, sodium molybdate, and other.

TABLE 3  
U.S. REPORTED CONSUMPTION, BY END USES, AND CONSUMER STOCKS OF MOLYBDENUM MATERIALS 1/

(Kilograms, contained molybdenum)

End use	Molybdic oxides	Ferro molybdenum 2/	Ammonium and sodium molybdate	Molybdenum scrap	Other	Total
2000, March:						
Steel:						
Carbon	35,400 r/	25,900	--	--	3,190	64,500 r/
High-strength low-alloy	33,700 r/	9,190 r/	--	--	--	42,900 r/
Stainless and heat-resisting	307,000	48,700	--	--	4,760	360,000
Full alloy	204,000 r/	189,000 r/	--	--	2,330	395,000 r/
Tool	W	10,900	--	--	1,450	12,300
Total	580,000 r/	284,000 r/	--	--	11,700	875,000 r/
Cast irons (gray, malleable, and ductile iron)	1,780	42,600 r/	--	--	763	45,100
Superalloys	92,600	W	--	(3/)	91,300	184,000
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	6	6
Other alloys	W	6,770	--	--	6,290	13,100
Mill products made from metal powder 4/	--	--	--	--	190,000	190,000
Cemented carbides and related products 5/	--	--	--	--	15	15
Chemical and ceramic uses:						
Pigments	--	--	W	--	--	W
Catalysts	77,300	--	W	--	W	77,300
Other	W	--	--	--	1,710	1,710
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	14,100	14,100
Other	98,200	5,130	77,500	--	14,900	196,000
Grand total	850,000 r/	338,000 r/	77,500	--	331,000	1,600,000 r/
Stocks, March 31, 2000	636,000 r/	212,000	5,720	33,300	846,000	1,730,000

See footnotes at end of table.

TABLE 3--Continued  
U.S. REPORTED CONSUMPTION, BY END USES, AND CONSUMER STOCKS OF MOLYBDENUM MATERIALS 1/

(Kilograms, contained molybdenum)

End use	Molybdic oxides	Ferro molyb- denum 2/	Ammonium and sodium molybdate	Molyb- denum scrap	Other	Total
2000, April:						
Steel:						
Carbon	14,800	W	--	--	3,190	18,000
High-strength low-alloy	35,300	8,690	--	--	--	44,000
Stainless and heat-resisting	278,000	45,300	--	--	4,760	328,000
Full alloy	177,000	153,000	--	--	2,330	332,000
Tool	W	3,720	--	--	1,450	5,170
Total	505,000	211,000	--	--	11,700	727,000
Cast irons (gray, malleable, and ductile iron)	2,300	30,300	--	--	763	33,300
Superalloys	96,800	W	--	(3/)	88,800	186,000
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	6	6
Other alloys	122	3,110	--	--	6,290	9,520
Mill products made from metal powder 4/	--	--	--	--	199,000	199,000
Cemented carbides and related products 5/	--	--	--	--	45	45
Chemical and ceramic uses:						
Pigments	--	--	1,270	--	--	1,270
Catalysts	77,300	--	W	--	W	77,300
Other	W	--	--	--	1,710	1,710
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	14,500	14,500
Other	24,700	25,900	74,800	--	14,900	140,000
Grand total	706,000	270,000	76,100	--	337,000	1,390,000
Stocks, April 30, 2000	609,000	189,000	4,840	35,900	852,000	1,690,000

r/ Revised. W Withheld to avoid disclosing company proprietary data; included in "Other" of the "Miscellaneous and unspecified uses" category. -- Zero.

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

2/ Includes calcium molybdate.

3/ Included in "Other" of the "Superalloys" category.

4/ Includes ingot, wire, rod, and sheet.

5/ Includes construction, mining, oil and gas, metal working machinery.

TABLE 4  
U.S. EXPORTS OF MOLYBDENUM ORES AND CONCENTRATES  
(including roasted concentrate), BY COUNTRY 1/

(Kilograms, contained molybdenum)

Country	1999	2000		
	January-December	February	March	Year to date
Australia	41,100	--	9,510	16,100
Belgium	4,740,000	353,000	542,000	1,090,000
Brazil	66,800	2,690	3,840	6,520
Canada	1,350,000	188,000	133,000	583,000
Chile	2,420,000	1,250	21,600	27,800
China	1,190,000	439,000	68,800	538,000
Germany	122,000	23,500	33,900	345,000
Italy	264,000	33,800	5,620	62,100
Japan	2,320,000	178,000	271,000	638,000
Korea, Republic of	210,000	885	723	2,200
Mexico	129,000	1,630	--	1,630
Netherlands	8,620,000	424,000	526,000	2,060,000
Spain	25,100	11,400	--	11,400
Sweden	613,000	23,800	24,000	142,000
United Kingdom	5,530,000	253,000	237,000	860,000
Other	207,000	14,000	1,450	16,000
Total	27,900,000	1,950,000	1,880,000	6,400,000

-- Zero.

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

Source: Bureau of the Census.

TABLE 5  
U.S. EXPORTS OF FERROMOLYBDENUM, BY COUNTRY 1/

(Kilograms, contained molybdenum)

	1999 r/		2000		
	December	January-December	February	March	Year to date
Australia	--	1,470	--	--	1,140
Canada	48,100	561,000	55,800	20,800	127,000
China	--	209,000	--	--	--
Japan	--	49,800	7,220	--	12,400
Korea, Republic of	--	11,000	--	--	--
Mexico	6,820	79,700	5,190	13,900	23,400
Other	--	599	--	--	--
Total	54,900	913,000	68,200	34,700	164,000

r/ Revised. -- Zero.

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

Source: Bureau of the Census.

TABLE 6  
U.S. IMPORTS FOR CONSUMPTION OF MOLYBDENUM PRODUCTS 1/

(Kilograms unless otherwise specified)

Material	January-December 1999			March 2000		
	Gross weight	Contained molybdenum	Value (c.i.f.) (thousands)	Gross weight	Contained molybdenum	Value (c.i.f.) (thousands)
Ore and concentrates roasted	8,020,000	5,090,000	\$39,600	477,000	302,000	\$1,800
Ore and concentrates other	2,710,000	1,480,000	7,810	472,000	274,000	1,460
Molybdenum chemicals:						
Oxides and hydroxides	1,180,000	NA	9,610	147,000	NA	907
Molybdates of ammonium	1,240,000	684,000	8,980	213,000	121,000	1,110
Molybdates (all others)	192,000	114,000	982	36,000	34,200	128
Molybdenum orange	2,050,000	NA	7,950	124,000	NA	576
Ferromolybdenum	7,690,000	4,830,000	44,000	1,140,000	716,000	4,510
Molybdenum powders	110,000	103,000	3,210	22,800	20,900	538
Molybdenum unwrought	145,000	137,000	2,110	--	--	--
Molybdenum waste and scrap	296,000	292,000	4,080	70,300	69,900	898
Molybdenum wire	5,530	NA	500	4,090	NA	241
Molybdenum other	7,850	NA	1,650	289	NA	138
Total	23,700,000	12,700,000	130,000	2,710,000	1,540,000	12,300

NA Not available. -- Zero.

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

Source: Bureau of the Census.